

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
18 August 2005 (18.08.2005)

PCT

(10) International Publication Number  
**WO 2005/076383 A3**

(51) International Patent Classification<sup>7</sup>: **H01L 51/30**,  
C09K 19/34, C07D 487/22, C07F 1/08, 3/06, 15/00, 15/04

(21) International Application Number:  
PCT/EP2005/000556

(22) International Filing Date: 18 January 2005 (18.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
04447032.6 10 February 2004 (10.02.2004) EP

(71) Applicant (for all designated States except US): UNIVER-  
SITE LIBRE DE BRUXELLES [BE/BE]; Avenue F.D.  
Roosevelt 50, CP 161, B-1050 BRUSSELS (BE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): DE CUPERE,  
Vinciane [BE/BE]; Rue du Tienne 12a, B-1460  
COURT-SAINT-ETIENNE (BE). TANT, Julien [BE/BE];  
Avenue des Ménestrels 111, B-1080 BRUSSELS (BE).  
GEERTS, Yves [BE/BE]; Avenue de l'Eglise St Julien  
10a, B-1160 BRUSSELS (BE).

(74) Agents: VAN MALDEREN, Michel et al.; pronovem -  
Office Van Malderen, Avenue Josse Goffin 158, B-1082  
Brussels (BE).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ,  
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,  
ZM, ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

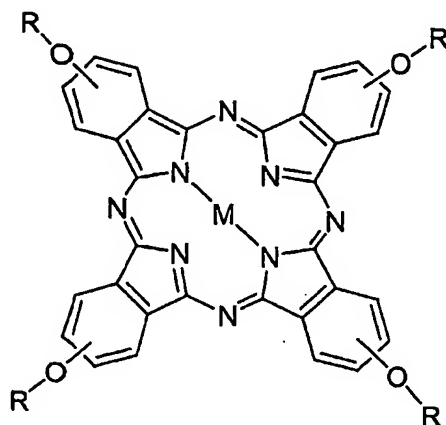
Published:

— with international search report

(88) Date of publication of the international search report:  
24 November 2005

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: PHTHALOCYANINE DERIVATIVES, THEIR USE AS HOMEOTROPICALLY ALIGNED LAYER IN ELECTRONIC  
DEVICES AND METHOD FOR THE MANUFACTURING THEREOF



(I)

(57) Abstract: The present invention discloses a liquid  
crystalline tetra alkyloxy-substituted phthalocyanine derivative  
with the following structure: (I) wherein M is a metal such  
as zinc (Zn), copper (Cu), platinum (Pt), palladium (Pd), ... or  
two atoms such as 2 H or 2 Li, and R is the followed branched  
aliphatic chain: (II) with n = 0 and x = 6-30 y = 6-30 z = 0-30  
or n = 1 and x = 10-30 y = 6-30 z = 0-30 or n > 1 and x = 6-30  
y = 6-30 z = 6-30.